

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Spring 2017 Levee Inspection Results

Reclamation District No. 1660 Tisdale

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
† Overall LMA Rating (Fall Only)				

** Non-receipt of Summer or Winter Inspection
Reports may effect overall annual rating.

† SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Spring 2017 Levee Inspection Results

Reclamation District No. 1660 Tisdale

Waterway			Bank	Unit Miles
Unit No. 01 Sacramento River			Left	2.94
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	4/6/2017 - 4/6/2017			
DWR Inspector	Bob Duffey			
Accompanied By	Andy Duffey RD 1660		Andy Duffey	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start		Rating **	A	Issue No.	14
LM End		Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Operations & Maintenance Manuals				
DWR ID	DWR_RD1660_01_s_2013_14				
Comment Code					
Inspector Comment					
The LMA has the O&M manuals.					

No Photos

LM Start		Rating **	A	Issue No.	15
LM End		Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Emergency Supplies & Equipment				
DWR ID	DWR_RD1660_01_s_2013_15				
Comment Code					
Inspector Comment					
The LMA has adequate emergency supplies and equipment.					

No Photos

LM Start		Rating **	A	Issue No.	16
LM End		Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Flood Preparedness & Training				
DWR ID	DWR_RD1660_01_s_2013_16				
Comment Code					
Inspector Comment					
The LMA has completed flood fight training in 2014.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.02	Rating **	M	Issue No.	17
LM End	0.06	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.063086 °	39.062462 °
				-121.837854 °	-121.837896 °
DWR ID	DWR_RD1660_01_s_2016_17				
Comment Code					
FE : Fence					
Inspector Comment					
4 foot high chain link					

No Photos

LM Start	0.05	Rating **	M	Issue No.	12
LM End	0.05	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.062643 °	39.062643 °
				-121.837857 °	-121.837857 °
DWR ID	DWR_RD1660_01_s_2012_12				
Comment Code					
BU : Building					
Inspector Comment					

Photo 1 of 1 : SP_2017_RD1660_8_12_20170315_00006.jpg



View of the building and fence at the landside toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.14	Rating **	M	Issue No.	21
LM End	0.14	Issue Type +	Ma	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.061322 °	39.061322 °
				-121.837993 °	-121.837993 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:46670					
DS_ID:22489					
EP_NO: N/A					
Repair Type: Non-Urgent					
Crossing Status: Found					
UCIP Comments: - needs proper abandonment.- opening of landside pipe almost buried.					
FIELD_STRUCT_DESC: *ABANDONED* 24-inch pipe thru levee, 16.4					
FBC. Slide gate in concrete well at toe of WW slope. (IV A-Winship).					
USACE bench mark on top of headwall at LS toe. O&M Manual SAC					
133, August 1955.					
FS Date: 10/10/2013					

LM Start	0.14	Rating **	M	Issue No.	21 (cont)
LM End	0.14	Issue Type +	Ma	Location *	LS

Photo 1 of 3 : UCIP_SP_2017_46670_38107.jpg



WS view: concrete box on levee slope. No pipe found on berm and river bank.

Photo 2 of 3 : UCIP_SP_2017_46670_38106.jpg



WS view: two slide gates in concrete box on levee slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.14	Rating **	M	Issue No.	21 (cont)	
LM End	0.14	Issue Type +	Ma	Location *	LS	
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP LMA Responsibility			39.061322 °	39.061322 °	
				-121.837993 °	-121.837993 °	
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:46670						
DS_ID:22489						
EP_NO: N/A						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: - needs proper abandonment.- opening of landside pipe almost buried.						
FIELD_STRUCT_DESC: *ABANDONED* 24-inch pipe thru levee, 16.4						
FBC. Slide gate in concrete well at toe of WW slope. (IV A-Winship).						
USACE bench mark on top of headwall at LS toe. O&M Manual SAC						
133, August 1955.						
FS Date: 10/10/2013						

Photo 3 of 3 : UCIP_SP_2017_46670_38105.jpg



WS view: closer view of two slide gates in concrete box on levee slope.

LM Start	0.61	Rating **	A	Issue No.	19
LM End	0.61	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.054537 °	39.054537 °
				-121.839288 °	-121.839288 °
DWR ID	DWR_RD1660_01_s_2017_19				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					
There are native grasses on both slopes.					

Photo 1 of 1 : SP_2017_RD1660_8_19_20170410_00017.jpg



View of the native grasses on both slopes.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	1.10	Rating **	M	Issue No.	9
LM End	1.45	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.047610 °	39.043221 °
				-121.838802 °	-121.835815 °
DWR ID	DWR_RD1660_01_s_2012_9				
Comment Code					
DT : Ditch					
Inspector Comment					

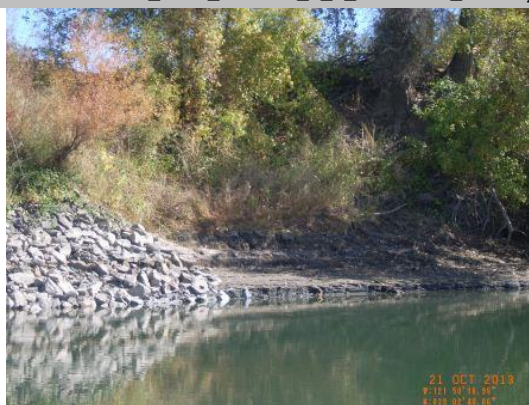
Photo 1 of 1 : SP_2017_RD1660_8_9_20170315_00005.jpg



View of a ditch along the landside toe.

LM Start	1.33	Rating **	M	Issue No.	8
LM End	1.36	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2015 USACE Erosion Survey, DRAFT			39.044361 °	39.043916 °
				-121.837654 °	-121.837305 °
DWR ID	DWR_RD1660_01_s_2016_8				
Comment Code					
Inspector Comment					
2009 - Erosion on levee toe where an old cobble site is failing. 2011 - Some new minor erosion. 2012 - Site extended downstream, bank is being impacted from the weight of the trees. 2013 - Minor new erosion at the toe. 2015: Minor new erosion at the toe. [2015 Site ID: SAC_120-6_L]					

Photo 1 of 1 : SP_2017_RD1660_8_8_20170315_00004.jpg



USACE 2013 Photo #1

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	1.53	Rating **	M	Issue No.	22
LM End	1.53	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.042304 °	39.042304 °
				-121.834783 °	-121.834783 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:22543 DS_ID:22484 EP_NO: 16476 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: - 16-inch old steel pipe abandoned. Abandoned pipe found on landside levee toe.- abandoned power pole on waterside.- mobile diesel pump on channel bank.- attached tin pipes exposed on levee surface. FIELD_STRUCT_DESC: 14-inch steel pipe through the levee crown, the placement of two 12-inch diameter tin pipes on the surface of the levee slopes attached to the existing 14-inch steel pipe. The pipe discharges into irrigation ditch on landside. An air vent on landside shoulder. (App. No. 16476 - Ettl, 1997). FS Date: 10/10/2013					

LM Start	1.53	Rating **	M	Issue No.	22 (cont)
LM End	1.53	Issue Type +	En	Location *	WS

Photo 1 of 3 : UCIP_SP_2017_22543_38142.jpg



WS view: two exposed 12" tin pipes on levee slope. These pipes connected to the pump on river bank.

Photo 2 of 3 : UCIP_SP_2017_22543_38141.jpg



WS view: two exposed 12" tin pipes on levee slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	1.53	Rating **	M	Issue No.	22 (cont)	
LM End	1.53	Issue Type +	En	Location *	WS	
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			39.042304 °		39.042304 °
				-121.834783 °		-121.834783 °
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:22543 DS_ID:22484 EP_NO: 16476 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: - 16-inch old steel pipe abandoned. Abandoned pipe found on landside levee toe.- abandoned power pole on waterside.- mobile diesel pump on channel bank.- attached tin pipes exposed on levee surface. FIELD_STRUCT_DESC: 14-inch steel pipe through the levee crown, the placement of two 12-inch diameter tin pipes on the surface of the levee slopes attached to the existing 14-inch steel pipe. The pipe discharges into irrigation ditch on landside. An air vent on landside shoulder. (App. No. 16476 - Ettl, 1997). FS Date: 10/10/2013						

Photo 3 of 3 : UCIP_SP_2017_22543_38140.jpg



WS view: two exposed tin pipes joined together and connected to 14-inch steel pipe on levee slope.

LM Start	2.01	Rating **	U	Issue No.	1
LM End	2.34	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.037640 °	39.034416 °
				-121.828421 °	-121.825698 °
DWR ID	DWR_RD1660_01_s_2012_1				
Comment Code					
DT : Ditch					
Inspector Comment					

Photo 1 of 1 : SP_2017_RD1660_8_1_20170315_00001.jpg



View of a large ditch along the landside toe.

* Location
LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

** Rating
A : Acceptable N : Not Inspected/Rated
M : Minimally Acceptable C : Corrected
U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type
Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	2.17	Rating **	M	Issue No.	20
LM End	2.17	Issue Type +	En	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.035322 °	39.035322 °
				-121.828490 °	-121.828490 °
DWR ID	DWR_RD1660_01_s_2017_20				
Comment Code					
TR : Tree or limb					
Inspector Comment					
Remove the tree from the waterside slope and toe.					

Photo 1 of 1 : SP_2017_RD1660_8_20_20170410_00018.jpg



View of the tree along the waterside slope and toe.

LM Start	2.37	Rating **	M	Issue No.	2
LM End	2.37	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.034107 °	39.034107 °
				-121.825152 °	-121.825152 °
DWR ID	DWR_RD1660_01_s_2012_2				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

Photo 1 of 1 : SP_2017_RD1660_8_2_20170315_00002.jpg



View of the toe cut by the farmer on the landside.

LM Start	2.39	Rating **	M	Issue No.	4
LM End	2.39	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.033858 °	39.033858 °
				-121.824985 °	-121.824985 °
DWR ID	DWR_RD1660_01_s_2012_4				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	2.58	Rating **	M	Issue No.	3
LM End	2.58	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.031405 °	39.031405 °
				-121.823403 °	-121.823403 °
DWR ID	DWR_RD1660_01_s_2012_3				
Comment Code					
EQ : Equipment					
Inspector Comment					

Photo 1 of 1 : SP_2017_RD1660_8_3_20170315_00003.jpg



View of equipment along the landside slope.

LM Start	2.61	Rating **	M	Issue No.	18
LM End	2.61	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.031020 °	39.031020 °
				-121.823091 °	-121.823091 °
DWR ID	DWR_RD1660_01_f_2016_18				
Comment Code					
DE : Debris					
Inspector Comment					
Remove concrete pipes from the landside toe.					

Photo 1 of 1 : SP_2017_RD1660_8_18_20170315_00007.jpg



View of the concrete pipes within the levee easement.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	2.62	Rating **	M	Issue No.	23
LM End	2.62	Issue Type +	En	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.030935 °	39.030935 °
				-121.823022 °	-121.823022 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:22632 DS_ID:22492 EP_NO: 10012 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: - abandoned pumphouse on landside toe. Needs confirmation from LMA or DWR Inspector about abandonment of pumphouse.- headwall on channel bank. FIELD_STRUCT_DESC: 24-inch steel pipe through levee, 24 feet below crown. Slide gate on waterward shoulder. Abandoned pumphouse at landward slope. (ABO No. 10012-Harris) FS Date: 10/10/2013					

LM Start	2.62	Rating **	M	Issue No.	23 (cont)
LM End	2.62	Issue Type +	En	Location *	LS

Photo 1 of 3 : UCIP_SP_2017_22632_38178.jpg



WS view: gate valve handle (center) on levee slope.

Photo 2 of 3 : UCIP_SP_2017_22632_38177.jpg



WS view: inlet steel pipe (right) immersed into channel water.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	2.62	Rating **	M	Issue No.	23 (cont)	
LM End	2.62	Issue Type +	En	Location *	LS	
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			39.030935 °		39.030935 °
				-121.823022 °		-121.823022 °
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:22632						
DS_ID:22492						
EP_NO: 10012						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: - abandoned pumphouse on landside toe. Needs confirmation from LMA or DWR Inspector about abandonment of pumphouse.- headwall on channel bank.						
FIELD_STRUCT_DESC: 24-inch steel pipe through levee, 24 feet below crown. Slide gate on waterward shoulder. Abandoned pumphouse at landward slope. (ABO No. 10012-Harris)						
FS Date: 10/10/2013						

Photo 3 of 3 : UCIP_SP_2017_22632_38176.jpg



WS view: closer view of inlet steel pipe immersed into channel water.
Pipe was supported by concrete headwall.

LM Start	2.63	Rating **	M	Issue No.	5
LM End	2.66	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.030891 °	39.030436 °
				-121.822956 °	-121.822617 °
DWR ID	DWR_RD1660_01_s_2012_5				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Spring 2017 Levee Inspection Results

Reclamation District No. 1660 Tisdale

Waterway			Bank	Unit Miles
Unit No. 02 Sutter Bypass			Right	9.10
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	4/6/2017 - 4/6/2017			
DWR Inspector	Bob Duffey			
Accompanied By	Andy Duffey RD 1660		Andy Duffey	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
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If additional items are noted, further documentation of those items must also be submitted.

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<http://cdec.water.ca.gov/lma.html>

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Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.00	Rating **	M	Issue No.	6
LM End	0.00	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.032910 °	39.032910 °
				-121.743665 °	-121.743665 °
DWR ID	DWR_RD1660_02_f_2016_6				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

Photo 1 of 2 : SP_2017_RD1660_9_6_20170315_00002.jpg



View of the slope instability looking from the landside toe.

LM Start	0.00	Rating **	M	Issue No.	6 (cont)
LM End	0.00	Issue Type +	Ma	Location *	LS

Photo 2 of 2 : SP_2017_RD1660_9_6_20170315_00003.jpg



Another view of the slope instability looking from the levee crown.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.02	Rating **	A/W	Issue No.	20
LM End	0.02	Issue Type +	Ma	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.033214 °	39.033214 °
				-121.743541 °	-121.743541 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:22663					
DS_ID:22495					
EP_NO: 10020					
Repair Type: No Action Needed					
Crossing Status: Found					
UCIP Comments: - pipe/opening not visible as it was submerged into water on both sides.- it seems that 36-inch concrete pipe through the levee. It needs confirmation from LMA/DWR Inspector.- USED bench mark on landside concrete vault.					
FIELD_STRUCT_DESC: 4 by 7 foot concrete outfall structure through levee, 34 feet below crown. Slide gate in 4 ft. by 8 ft. concrete riser on waterside slope. (App. 10020-Bandoni). O&M Manual SAC 133, August 1955.					
FS Date: 10/10/2013					

LM Start	0.02	Rating **	A/W	Issue No.	20 (cont)
LM End	0.02	Issue Type +	Ma	Location *	LS

Photo 1 of 3 : UCIP_SP_2017_22663_38248.jpg



WS view: 4 ft. by 8 ft. concrete box with slide gate on levee slope. USED bench mark on top of the box.

Photo 2 of 3 : UCIP_SP_2017_22663_38247.jpg



WS view: inside view of concrete box on levee slope. Slide gate in concrete box.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.02	Rating **	A/W	Issue No.	20 (cont)	
LM End	0.02	Issue Type +	Ma	Location *	LS	
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP LMA Responsibility			39.033214 °		39.033214 °
				-121.743541 °		-121.743541 °
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:22663						
DS_ID:22495						
EP_NO: 10020						
Repair Type: No Action Needed						
Crossing Status: Found						
UCIP Comments: - pipe/opening not visible as it was submerged into water on both sides.- it seems that 36-inch concrete pipe through the levee. It needs confirmation from LMA/DWR Inspector.- USED bench mark on landside concrete vault.						
FIELD_STRUCT_DESC: 4 by 7 foot concrete outfall structure through levee, 34 feet below crown. Slide gate in 4 ft. by 8 ft. concrete riser on waterside slope. (App. 10020-Bandoni). O&M Manual SAC 133, August 1955.						
FS Date: 10/10/2013						

Photo 3 of 3 : UCIP_SP_2017_22663_38246.jpg



WS view: closer view of U shaped concrete headwall in bypass channel.
Pipe not visible.

LM Start	0.04	Rating **	A/W	Issue No.	8
LM End	0.04	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.033502 °	39.033502 °
				-121.743665 °	-121.743665 °
DWR ID	DWR_RD1660_02_f_2016_8				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					
Repair the site before flood season.					

Photo 1 of 2 : SP_2017_RD1660_9_8_20170315_00004.jpg



View of the levee from the landside toe. Beaver hole is where the reflective traffic cone is.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.04	Rating **	A/W	Issue No.	8 (cont)	
LM End	0.04	Issue Type +	Ma	Location *	LS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start		End
Item	Slope Stability			39.033502 °		39.033502 °
				-121.743665 °		-121.743665 °
DWR ID	DWR_RD1660_02_f_2016_8					
Comment Code						
S1 : Repair slope instability.						
Inspector Comment						
Repair the site before flood season.						

Photo 2 of 2 : SP_2017_RD1660_9_8_20170315_00005.jpg



View of a beaver hole along the toe road outside of the levee easement.

LM Start	2.82	Rating **	M	Issue No.	18
LM End	2.82	Issue Type +	En	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.071853 °	39.071853 °
				-121.759655 °	-121.759655 °
DWR ID	DWR_RD1660_02_s_2017_18				
Comment Code					
DE : Debris					
Inspector Comment					
Remove the debris from the waterside toe next to the bridge.					

Photo 1 of 1 : SP_2017_RD1660_9_18_20170410_00016.jpg



View of the debris along the waterside toe next to the bridge.

LM Start	3.18	Rating **	M	Issue No.	10
LM End	3.18	Issue Type +	En	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.076835 °	39.076835 °
				-121.761737 °	-121.761737 °
DWR ID	DWR_RD1660_02_s_2017_10				
Comment Code					
TR : Tree or limb					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	3.56	Rating **	M	Issue No.	11
LM End	3.56	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.082035 °	39.082035 °	
			-121.763885 °	-121.763885 °	
DWR ID	DWR_RD1660_02_s_2017_11				
Comment Code					
TR : Tree or limb					
Inspector Comment					

No Photos

LM Start	4.41	Rating **	M	Issue No.	12
LM End	4.41	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.093812 °	39.093812 °	
			-121.768795 °	-121.768795 °	
DWR ID	DWR_RD1660_02_s_2017_12				
Comment Code					
TR : Tree or limb					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	5.10	Rating **	M	Issue No.	21
LM End	5.10	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.102512 °	39.102512 °
				-121.774960 °	-121.774960 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:22705 DS_ID:22499 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pressure relief valve on landside levee slope.Pump platform under construction for upgrade (raising platform)Look for new upgrade/revision permit. FIELD_STRUCT_DESC: 18-inch steel pipe through the levee, 5.8 feet below crown. Pump in channel. Gate valve on the landward berm. Discharges into 4-foot by 4 foot concrete box on the landward berm. 2-inch electric conduit through the levee, 3.0 feet below the crown. (Permit No. 4215, 1963) FS Date: 10/15/2013					

LM Start	5.10	Rating **	M	Issue No.	21 (cont)
LM End	5.10	Issue Type +	En	Location *	WS

Photo 1 of 3 : UCIP_SP_2017_22705_38394.jpg



WS view: pump platform under construction.

Photo 2 of 3 : UCIP_SP_2017_22705_38393.jpg



WS view: pump platform under construction. 18" steel pipe and 2" electric conduit under steel platform.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	5.10	Rating **	M	Issue No.	21 (cont)	
LM End	5.10	Issue Type +	En	Location *	WS	
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			39.102512 °	39.102512 °	
				-121.774960 °	-121.774960 °	
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:22705						
DS_ID:22499						
EP_NO: N/A						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: Pressure relief valve on landside levee slope.Pump platform under construction for upgrade (raising platform)Look for new upgrade/revision permit.						
FIELD_STRUCT_DESC: 18-inch steel pipe through the levee, 5.8 feet below crown. Pump in channel. Gate valve on the landward berm. Discharges into 4-foot by 4 foot concrete box on the landward berm. 2-inch electric conduit through the levee, 3.0 feet below the crown. (Permit No. 4215, 1963)						
FS Date: 10/15/2013						

Photo 3 of 3 : UCIP_SP_2017_22705_38392.jpg



LS view: pressure relief valve on levee slope.

LM Start	6.49	Rating **	M	Issue No.	13
LM End	6.49	Issue Type +	En	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.115142 °	39.115142 °
				-121.794823 °	-121.794823 °
DWR ID	DWR_RD1660_02_s_2017_13				
Comment Code					
TR : Tree or limb					
Inspector Comment					
Remove the tree from the waterside slope and toe.					

Photo 1 of 1 : SP_2017_RD1660_9_13_20170410_00015.jpg



View of the tree along the waterside slope and toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	6.60	Rating **	M	Issue No.	14
LM End	6.60	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.116168 °	39.116168 °	
			-121.796545 °	-121.796545 °	
DWR ID	DWR_RD1660_02_s_2017_14				
Comment Code					
TR : Tree or limb					
Inspector Comment					

No Photos

LM Start	6.72	Rating **	M	Issue No.	15
LM End	6.72	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.117123 °	39.117123 °	
			-121.798290 °	-121.798290 °	
DWR ID	DWR_RD1660_02_s_2017_15				
Comment Code					
TR : Tree or limb					
Inspector Comment					

No Photos

LM Start	7.25	Rating **	M	Issue No.	19
LM End	7.25	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.121555 °	39.121555 °	
			-121.806448 °	-121.806448 °	
DWR ID	DWR_RD1660_02_s_2017_19				
Comment Code					
TR : Tree or limb					
Inspector Comment					
Remove the tree from the waterside toe.					

Photo 1 of 1 : SP_2017_RD1660_9_19_20170410_00017.jpg



View of the tree along the waterside toe.

* Location	** Rating	+ Issue Type
LS : Land Side WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
N/A : Not Applicable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	7.76	Rating **	M	Issue No.	16
LM End	7.76	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.125900 °	39.125900 °	
			-121.814073 °	-121.814073 °	
DWR ID	DWR_RD1660_02_s_2017_16				
Comment Code					
TR : Tree or limb					
Inspector Comment					

No Photos

LM Start	7.83	Rating **	M	Issue No.	5
LM End	7.83	Issue Type +	En	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.126448 °	39.126448 °	
			-121.815242 °	-121.815242 °	
DWR ID	DWR_RD1660_02_f_2016_5				
Comment Code					
EQ : Equipment					
Inspector Comment					

Photo 1 of 1 : SP_2017_RD1660_9_5_20170315_00001.jpg



View of the ag equipment within the levee easement.

LM Start	8.03	Rating **	M	Issue No.	17
LM End	8.03	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.128130 °	39.128130 °	
			-121.818210 °	-121.818210 °	
DWR ID	DWR_RD1660_02_s_2017_17				
Comment Code					
TR : Tree or limb					
Inspector Comment					
Remove the tree from the waterside slope and toe.					

Photo 1 of 1 : SP_2017_RD1660_9_17_20170410_00018.jpg



View of the tree along the waterside slope and toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	9.07	Rating **	A/W	Issue No.	22
LM End	9.07	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.136861 °	39.136861 °
				-121.833974 °	-121.833974 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:22708					
DS_ID:22505					
EP_NO: N/A					
Repair Type: No Action Needed					
Crossing Status: Found					
UCIP Comments: - inlet structure 160 ft off the levee center on landside drainage ditch.					
FIELD_STRUCT_DESC: 48-inch steel pipe through the levee, 29.0 feet below the crown. Slide gate and concrete bulkhead on channel bank.					
Staff gage on the waterward berm. ABO# 10021. O&M Manual SAC 133, August 1955.					
FS Date: 10/15/2013					

LM Start	9.07	Rating **	A/W	Issue No.	22 (cont)
LM End	9.07	Issue Type +	Ma	Location *	WS

Photo 1 of 3 : UCIP_SP_2017_22708_38406.jpg



WS view: overview of concrete box on channel bank. It looks like a fish ladder. Pipe discharges into this box.

Photo 2 of 3 : UCIP_SP_2017_22708_38405.jpg



WS view: concrete box on channel bank. Pipe end with slide gate. Pipe discharges into this box.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

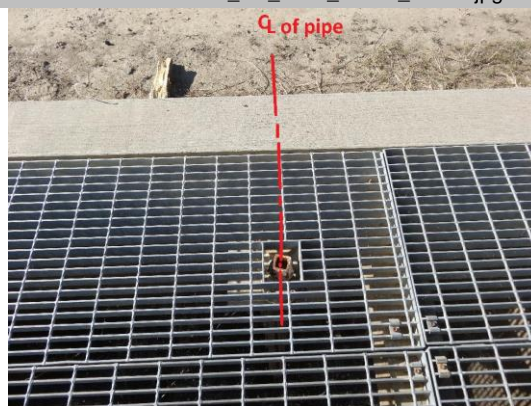
Levee Inspection Report By Mile - Spring 2017

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	9.07	Rating **	A/W	Issue No.	22 (cont)
LM End	9.07	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.136861 °	39.136861 °
				-121.833974 °	-121.833974 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:22708					
DS_ID:22505					
EP_NO: N/A					
Repair Type: No Action Needed					
Crossing Status: Found					
UCIP Comments: - inlet structure 160 ft off the levee center on landside drainage ditch.					
FIELD_STRUCT_DESC: 48-inch steel pipe through the levee, 29.0 feet below the crown. Slide gate and concrete bulkhead on channel bank.					
Staff gage on the waterward berm. ABO# 10021. O&M Manual SAC 133, August 1955.					
FS Date: 10/15/2013					

Photo 3 of 3 : UCIP_SP_2017_22708_38409.jpg



WS view: concrete box on channel bank. Pipe discharges into this box.
A slide gate inside this box.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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